Illinois Commerce Commission Report to the General Assembly: Experimental Programs Initiated by Electric Utilities Under Section 16-106 of the Electric Service Customer Choice and Rate Relief Law of 1997 During 2002

The Illinois Commerce Commission

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Executive Summary

The Illinois Commerce Commission ("Commission") submits its fifth annual Report to the General Assembly regarding experimental programs implemented by electric utilities pursuant to Section 16-106 of the Electric Service Customer Choice and Rate Relief Law of 1997, 220 ILCS 5/16-106 ("Customer Choice Law"). This report is submitted in response to the directive in Section 16-106 that the Commission "review and report annually the progress, participation and effects of such experiments to the General Assembly."

Electric utilities have operated a total of nineteen experimental programs since the Customer Choice Law was enacted in December 1997. Nine programs were in effect during 2002. AmerenCIPS, AmerenUE, ComEd and Illinois Power each operated a load curtailment program. Additionally, ComEd operated five other programs. Only ComEd initiated a new program in 2002. Summary information about the experimental programs that were in effect in 2002 is provided below (see Table 1).

The Commission has concluded the following about the programs implemented under Section 16-106 during 1997-2002:

- Utilities have operated two general types of experimental programs. First, electric utilities have offered programs to narrowly defined customer groups. ComEd has operated several programs of this type. The second general program concerns measures to address reliability issues, such as load curtailment programs.

- There should be no direct impact of the experimental programs on the rates of customers not participating in the programs because the Commission is required to exclude the costs and revenues associated with Section 16-106 programs when setting electric rates.

- Customers in retail businesses who do not obtain discounts associated with some of the experimental programs could face a slight competitive disadvantage relative to the customers who receive the discounts; this advantage will persist until December 31, 2006, the date at which electric utilities may no longer impose transition charges on customers who take delivery services.

- Expenditures by ComEd on Section 16-106 programs have been significant. ComEd spent approximately $131 million during 1997-2002 on its Section 16-106 programs.

- The Commission believes that the value of the information obtained from some of the programs obtained is lower than the costs associated with those programs.

- Companies that have implemented Section 16-106 programs could have submitted these programs to the Commission for approval, which would have permitted the Commission to review and comment on the programs prior to their implementation.

- As a consequence of the Commission's adoption of 83 Illinois Administrative Code Part 452 ("Part 452"), as a general practice, pricing, billing and experiments under which power and energy is offered for sale can no longer be offered under Section 16-106 by an electric utility choosing to organize itself as an "Integrated Distribution Company". In response to the adoption of Part 452, ComEd has terminated all but one of its experimental programs. The only ComEd Section 16-106 program that is still in effect, the "High Density Electrical Load Commercial Installation Pricing Experiment," is closed to new customers.

  Load curtailment programs are an example of programs that involve the sale of power and energy. However, since Part 452 permits electric utilities to offer experimental programs under tariffs approved by the Commission, experimental load curtailment programs and other programs that involve the sale of power will likely continue.

Table 1 provides general information about the Section 16-106 programs that electric utilities operated during 2002:

Table 1: 2002 Experimental Programs Operated by Electric Utilities Under Section 16-106 of the Public Utilities Act

Name of Program	Electric Utility	Eligible Customers	Participation Levels and Program Results
Voluntary Curtailment Billing Experiment	AmerenCIPS AmerenUE	Nonresidential customers	No general curtailments were called.
Enhanced Distribution Billing and Pricing Experiment	ComEd	Customers demonstrating a need for enhanced distribution services	No customers participated.
High Density Electrical Load Commercial Installation Pricing Experiment	ComEd	Nonresidential customers requesting service for very high electrical load density requirements	One customer participated.
Low Consumption Communication Network Device Billing and Pricing Experiment	ComEd	Customers with at least 25 low consumption level communication devices	One customer participated.
Wind and Photovoltaic Generation Pricing Experiment	ComEd	Retail customers who own and operate small (up to 40 kW) wind or photovoltaic generators	20 customers participated in the program during 2002.
Dispatchable Back-Up Generation and Distribution Reliability Pricing Experiment	ComEd	Customers served by designated distribution feeders who could install generating equipment	Three customers participated in the program. ComEd deferred $1.8 million in transmission and distribution work for one year.
Voluntary Load Response And System Reliability Initiative Experiment	ComEd	Non-residential customers, excluding Power Purchase Option customers	No general curtailments were called during 2002.
Load Reduction Experiment	Illinois Power	Non-residential customers	No general curtailments were called during 2000-2002.

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I. Introduction

The "Electric Service Customer Choice and Rate Relief Law of 1997" ("Customer Choice Law"), enacted into law on December 17, 1997, made a number of significant changes to the Public Utilities Act ("Act"). Among the changes is new Section 16-106, which permits electric utilities to offer experimental programs at their discretion to a selected group of customers. According to Section 16-106, programs offered under this section of the Act may include experiments for the "provision or billing of services on a consolidated or aggregated basis, as well as other experimental programs."

Section 16-106 requires the Commission to report annually to the General Assembly describing the Commission's evaluation of the "progress, participation and effects" of these programs. This is the Commission's fifth report to the General Assembly concerning Section 16-106 programs.

To date, four electric utilities, AmerenCIPS, AmerenUE, ComEd, and Illinois Power Company, have undertaken a total of nineteen experimental programs filed with the Commission pursuant to Section 16-106. AmerenCIPS has operated one program, AmerenUE has operated two programs and Illinois Power has operated three programs. ComEd has operated a total of thirteen programs. Only ComEd initiated a new program during 2002. With one exception, each of ComEd's programs have expired or been terminated by ComEd. Only the nine programs that were in effect during 2002 are described in this report.[1]

ComEd has offered a mixture of experimental programs. Some of ComEd's thirteen experimental programs were designed for narrowly defined groups, such as retail businesses and schools. Other programs have been aimed at enhancing the reliability of ComEd's utility service, through, for example, voluntary load curtailment. Overall, several thousand ComEd customers have participated in ComEd's experimental programs and have realized over one hundred million dollars in savings from their participation in these programs.

The Ameren companies and Illinois Power operated load curtailment programs similar to the load curtailment programs operated by ComEd. These programs are still in effect, but no curtailments have been called under the programs. Additionally, AmerenUE operated a second program, the "Pay As You Go Program," designed to evaluate low-income customers' response to an innovative bill payment option. This program expired in 2001.

[1] Programs that have expired have been described in the Commission's previous reports to the General Assembly. These reports are available on the ICC web site at: http://www.icc.state.il.us/ec/electricity.aspx.

As required by Section 16-106, the companies offering experimental programs filed notices with the Commission containing statements describing their programs. The notices generally included the following information: effective program dates; program availability; general program purpose and objectives; and, participation incentives (e.g., rate discounts), if any. The letters sent to the Commission accompanying each notice typically reflected the Companies' interpretation of Section 16-106 that an experimental program becomes effective upon the filing of a notice with the Commission. The Companies have provided information and reports to the Commission to assist the Commission in preparing the Commission's Section 16-106 reports.

The balance of this Report describes in more detail the nine programs filed under Section 16-106 that were in effect during 2002. As required by Section 16-106, the Report also describes the Commission's assessment of the "progress, participation and effects" of each of the programs. After each program description, a table is presented showing summary information about the program. In the Conclusion of the Report, the Commission offers general comments about issues related to Section 16-106 experimental programs. The Appendix to the Report contains a listing of each Section 16-106 program that electric utilities implemented during 1997-2002.

II. Section 16-106 of the Public Utilities Act

The authority provided electric utilities to offer certain types of experimental programs is stated in Section 16-106 as follows:

> Sec. 16-106. Billing experiments. During the mandatory transition period,[2] an electric utility may **at its discretion** conduct one or more experiments…. (Emphasis supplied)

Section 16-106 states that electric utilities may choose which customers are eligible for billing experiments (and, of course, which are not eligible), and that the Commission should allow the experiments to proceed: [3]

> The offering of such a program by an electric utility to retail customers participating in the program, and the participation by those customers in the program, shall not create any right in any other retail customer or group of customers to participate in the same or a similar program. The Commission shall allow such experiments to go into effect upon the filing by the electric utility of a statement describing the program…

Section 16-106 makes clear, however, that the Commission retains its authority to approve experimental programs submitted to the Commission for approval under Sections of the Act other than Section 16-106:[4]

> Nothing contained in this Section shall be deemed to prohibit the electric utility from offering, or the Commission from approving, experimental rates, tariffs and services in addition to those allowed under this Section.

It thus appears that one effect of Section 16-106 is to provide electric utilities that desire to implement experimental programs with a choice. Utilities may either (1) submit the program to the Commission for approval in the traditional manner; or, (2) implement a qualifying program as a billing experiment pursuant to Section 16-106.

Section 16-106 lists the types of billing experiments that may be offered by electric utilities. The experiments may include those

[2]The "mandatory transition period" will end on January 1, 2007.
[3] The Commission has not undertaken any formal investigation to determine whether any of the experimental programs are consistent with Section 16-106.
[4] No experimental programs have been brought by electric utilities to the Commission for approval since the enactment of the Customer Choice Law.

> …for the provision or billing of services on a consolidated or aggregated basis, for the provision of real-time pricing, or other billing or pricing experiments, and may include experimental programs offered to groups of retail customers possessing common attributes as defined by the electric utility, such as the members of an organization that was established to serve a well-defined industry group, companies having multiple sites, or closely-located or affiliated buildings, provided that such groups exist for a purpose other than obtaining energy services and have been in existence for at least 10 years.

The Commission must inform the General Assembly about the experiments filed under Section 16-106:

> The Commission shall review and report annually the progress, participation and effects of such experiments to the General Assembly. Based upon its review, recommendations for modification of such experiments may be made by the Commission to the Illinois General Assembly.

III. Section 16-106 Programs Operated by AmerenCIPS and AmerenUE During 2002

Voluntary Curtailment Billing Experiment (AmerenCIPS/AmerenUE)

1. Program Summary

In 1999, AmerenCIPS and AmerenUE filed statements with the Commission describing their intention to implement "Voluntary Curtailment Billing Experiments."

Ameren's filings Ameren state that the curtailment programs have three purposes:

- To provide Ameren with "additional flexibility in providing reliable power and energy to its native load customers during periods of power supply constraints;"
- To provide "participating customers an opportunity to realize additional benefits from operation of customer-owned generation and/or load management activities when asked to do so by Ameren"; and
- To reduce "Ameren's incremental cost of power and energy."

Ameren's statements noted that customers might be asked to curtail load during periods other than at a time of system peak demand.

The programs are available to those customers with interval meters who agree to curtail an average of 1,000 kWh per hour during the specified curtailment period. The programs are also available to multi-premises or multi-metered customers who agree to accept notification at a single location and also agree to curtail an average of 500 kWh per hour at three or more premises or meter locations.

Potential participants must demonstrate to Ameren their ability to comply with the provisions of the experimental program. The statement filed by Ameren indicates that the Companies will use their "sole discretion" in determining which customers may participant in the programs. Customers are not required to participate in each curtailment called by Ameren, but could be terminated from the program should they repeatedly decline to curtail load when asked to do so.

Notification to customers of curtailment periods will occur either by 8:00 a.m. on the day prior to, or the morning of, the curtailment. Customers will be advised of the duration of the curtailment and the price per kWh customers will paid for the curtailment. Customers who intend to participate in a curtailment must indicate their desire to participate by 10:00 a.m. of the day the notification was given.

The statements indicated that customers would not receive a demand credit for participation. AmerenCIPS' statement indicates that participating customers may also be subject to a monthly "Meter Translation Charge" and will be charged an "Administrative Charge" for each curtailment. However, Ameren later made the decision to implement the program without applying the Administrative Charge."

2. Program Participation, Progress and Effects

No curtailments were called during 1999-2002.

Table 2: Voluntary Curtailment Billing Experiment

VOLUNTARY CURTAILMENT BILLING EXPERIMENT (AMERENCIPS AND AMERENUE)			
Program Type / Effective Dates	**Program Objectives**	**Eligible Customers / Participation Incentives**	**Program Results / Expenditures**
The AmerenCIPS billing program began March 19, 1999. The AmerenUE billing program began May 17, 1999.	To assist AmerenCIPS and AmerenUE in providing power and energy during periods of power supply constraints.	AmerenCIPS: Customers who can curtail demand by 1 MW at a single site or 500 kW at 3 or more sites. AmerenUE: Customers who can curtail demand by 1 MW at a single site Customers receive a credit for each kWh curtailed.	No curtailments called during 1999-2002.

IV. Section 16-106 Programs Offered by ComEd During 2002

This Section of the Report provides information about the six ComEd experimental programs that were in effect during 2002.

A. Wind and Photovoltaic Generation Pricing Experiment

1. Program Summary

ComEd filed this experimental program on February 7, 2000. ComEd closed the program to new customers on February 1, 2002, and terminated the program on August 8, 2002. As permitted under 83 Illinois Administrative Code Part 452.230(a), ComEd now offers the same service on a contract basis under Rider 4 (Parallel Operation of Customer's Generating Facilities).

As described in ComEd's February 2000 filing, the purpose of the "Wind and Photovoltaic Generation Pricing Experiment" was to provide an incentive to retail customers to invest in wind and photovoltaic generation sources.

ComEd's filing stated that several of its experimental programs are designed to enhance system reliability. Unlike its previous reliability-related programs, which focused on the use of demand-side resources to enhance reliability, the Wind and Photovoltaic Generation Pricing Experiment program used supply-side measures to advance that same goal.

Wind and photovoltaic power systems are examples of "distributed resources," a term that includes, among other things, customer self-generation at the distribution level. ComEd stated that distributed resources could enhance reliability by freeing transmission line capacity and distribution line capacity to serve reliability purposes. According to ComEd, distributed resources may also have other benefits. For example, distributed resources could benefit a utility's system to the extent the resources are able to provide a substitute for investment in a utility's transmission and distribution system. Distributed resources could also benefit customers individually if the resources are located on a customer's site. With this experiment, ComEd intended to determine whether small wind and photovoltaic power systems are capable of enhancing system reliability.

In addition to benefits related to system reliability, ComEd stated that the program could benefit customers and vendors by providing experience with ComEd's "Interconnection Guidelines for Photovoltaic Systems." Additionally, the program would permit ComEd to gain experience with the metering and billing systems needed to support expansion of the wind and photovoltaic distributed generation market. As an additional benefit, the program could encourage private investment in wind and photovoltaic energy sources. According to ComEd, such investment would stimulate economic growth, diversify Illinois' energy resources mix and also protect the environment.

The program was available to retail customers who own and operate wind and photovoltaic generators located on the customer's premises, provided that the generators are less than 40 kW in size. ComEd estimated that about 35 to 40 customers own and operate the wind and photovoltaic equipment needed to participant in the program. Total participation in the program was limited to 0.1% of the total load supplied by ComEd during the previous year. Thus, load eligible to participate in the program was limited to approximately 200 MW. The installations were reviewed by ComEd to ensure interconnection compliance and the safety and reliable operation of the Company's distribution system. Each generator had to be capable of being classified as a "Qualifying Facility," as that term is defined in 83 Illinois Administrative Code Part 430.

A single meter with dual channels was used to measure the amount of power generated by the customer and supplied to ComEd and the amount of power delivered by ComEd to the customer. Participants were not obligated to pay for this meter.

The rate that customers paid for the electricity supplied by ComEd was based on the same rates applicable to customers of similar end-use characteristics. The rate ComEd paid for the power generated by the customers was the rate specified in ComEd's Rider 4 (approximately two to six cents per kWh). ComEd also offered an "annual participation incentive" to customers as an inducement to participate in the program. This payment was equal to the difference between the customer's average retail rate (exclusive of the customer's monthly customer charge and certain taxes and other fees) les the price paid by ComEd for power generated by the customer. Effectively, then, participating customers received credit for the power they generated and sold to ComEd in the amount equal to the customer's retail rate, rather than the lower rate specified in Rider 4.

ComEd's statement noted that customers could apply to the Department of Commerce and Community Affairs for a grant or rebate under the "Renewable Energy Resources Program" to help pay for the wind or photovoltaic generator.

2. Program Participation, Progress and Effects

ComEd noted that it expended a significant amount of effort to make information about the program available to potential customers. ComEd included bill inserts in customer bills describing the program, issued press releases and established a hotline that customers could call to obtain information about the experiment. ComEd also enlisted the aid of organizations such as the Environmental Law and Policy Center, the Illinois Solar Energy Association and the Illinois Renewable Energy Association to promote the experiment.

ComEd installed automatic meter reading equipment at customer locations capable of recording the amount of electricity customers were supplying to ComEd from their generators. The meters were also capable of recording the time at which electricity is supplied to ComEd. These meters communicated with ComEd electronically.

ComEd stated that its technical and billing and credit personnel addressed issues related to the experiment.

Nine customers signed agreements and participated in the program during 2000 and ten additional customers participated in the program during 2001. Another customer signed an agreement in 2002 to participate in the program.[5]

During 2002, the 20 participating customers sold ComEd a total of 13,589 kWh and received payments from ComEd totaling $443.01 for the electricity supplied. Incentive payments of $644.32 were made to participating customers, bringing total payments to customers in 2002 to $1,087.33. Customers also avoided about $22,000 in metering costs during the life of the program.

By the end of 2002, ComEd had about 58 kW enrolled in the program. Of this total, about 10 kW was attributable to wind-powered generation.

Costs incurred by ComEd in administering the program include the costs to promote the program (which ComEd notes are part of ComEd's expenditures relating to the promotion of renewable energy), administrative costs, and costs that were incurred in connection with the installation of the automatic meter reading equipment. As noted above, ComEd provided the meters used in the program. Total costs incurred by ComEd were less than $100,000.

In its preliminary assessment of the program, ComEd noted that the program's currently small size does not make it possible to determine whether these resources could have a significant impact on reliability. ComEd also noted, however, that despite the program's small size, ComEd has gained experience with the metering and billing systems that support the distributed resources market. With respect to the program's participation rate, ComEd stated that it observed that some customers who operate wind-powered and photovoltaic equipment did not have excess energy to supply to ComEd, and therefore did not participate in the program. Other customers operated generating equipment with capacities greater than 40 kW. These customers were therefore ineligible for the program.

[5] The twenty participating customers signed agreements with ComEd to continue service under Rider 4.

ComEd believes there is continuing customer interest in a wind and photovoltaic experimental program. ComEd notes that participation doubled during the life of the program. Additionally, six new customers have begun to receive similar service under ComEd's Rider 4.

Table 3: Wind and Photovoltaic Generation Pricing Experiment

WIND AND PHOTOVOLTAIC GENERATION PRICING EXPERIMENT (COMED)			
Program Type / Effective Dates	**Program Objectives**	**Eligible Customers / Participation Incentives**	**Program Results / Expenditures**
Pricing program was filed 2/7/2000. Program terminated in 2002. Same service is now offered under Rider 4.	To determine whether small wind and photovoltaic power systems can provide reliability-enhancing measures.	ComEd retail customers who own and operate small (up to 40 kW) wind or photovoltaic generators located on the customer's premises.	Twenty customers have participated in the program since its inception. Participation doubled between 2000 and 2002.

B. Dispatchable Back-up Generation and Reliability Pricing Experiment

1. Program Summary

On March 10, 2000, ComEd filed a statement with the Commission describing its intention to implement the "Dispatchable Back-up Generation and Reliability Pricing Experiment," a program that was designed to use customer-owned generation to reduce the stress on certain "distribution feeders." The program ended on May 1, 2002.

ComEd's filing stated that ComEd has identified a number of distribution feeders that tend to be stressed during peak periods. During such periods, ComEd would consider requesting the customers served by those feeders to reduce their loads. Eventually, rather than seek customer compliance with load reduction requests, ComEd would invest in distribution feeder upgrades. The objective of this program is to determine if those investments can be avoided or delayed by reliance on customer-owned generation.

ComEd's initial statement indicated that only customers owning generators that are capable of providing 200 kW of feeder relief would be eligible for the program. However, on June 12, 2000, ComEd filed a statement with the Commission indicating that it would eliminate that requirement (all other program provisions were unaltered).

As an incentive to participate, customers were offered payments based on the amount of investment ComEd would avoid by not upgrading the distribution feeders. Payments were only made for incremental investments in new capacity.

The following conditions applied to the program: Each participating customer must agree to operate its generator (or allow ComEd to start-up the generator, if the generator is controlled by ComEd) upon ComEd's request. Customers will be asked to start-up their generators no more than 15 times each year. The duration of each request will be between two and seven hours, up to a maximum of 75 hours per year. ComEd will provide a one-hour notice of its intention to seek start-up of the customer-owned generation. A penalty of 50% of the incentive payment will be assessed in each instance of customer non-compliance with the start-up requests. Back-up generating facilities may be purchased from any supplier, but will be subject to ComEd's system protection requirements.

ComEd stated that it will gather data with respect to the program, and will provide a report to the Commission on the results.

2. Program Participation, Progress and Effects

To get the program underway, ComEd first identified the feeder systems that would require upgrade work to serve maximum levels of customer demand. A total of 22 feeders were included in the program. Next, the customers served by those feeders who had the capacity to operate their own generating equipment were identified. There were 94 customers who met this requirement, and others were added later when the 200 kW minimum size requirements were eliminated. ComEd then identified the amount of potential incentive to those customers, based on the costs that could be avoided if the customers provided generating equipment in response to the program. ComEd made presentations to these customers and to companies involved in the sale of generating equipment.

A total of three customers elected to participate in the program. Two customers installed new generating equipment, and the other customer increased the amount of its existing generating capacity. These three customers were paid approximately $184,000 in incentive payments for their participation. ComEd estimated that it deferred approximately $1.8 million in transmission and distribution work for one year as a result of the program (although a recent ComEd analysis shows that the deferred feeder work is no longer necessary because the transmission and distribution needs have now been met through another manner).

ComEd identified two primary reasons as the causes for the low participation rate in the program. First, it noted, a limited number of customers were potentially eligible for the program, given the eligibility criteria. Second, ComEd found that the cost of installing or upgrading equipment was often higher than the costs that ComEd would avoid by not performing distribution upgrades. Nevertheless, ComEd believes that it has gained information concerning the impact of the incentive payments on customer decision-making with respect to the installation of generation capacity. ComEd also believes that the incentive payments provided to participating customers enabled customers to install back-up generation that the customers perceived as beneficial to their business operations.

Table 4: Dispatchable Back-up Generation and Reliability Pricing Experiment

DISPATCHABLE BACK-UP GENERATION AND RELIABILITY PRICING EXPERIMENT (COMED)			
Program Type / Effective Dates	**Program Objectives**	**Eligible Customers / Participation Incentives**	**Program Results / Expenditures**
The pricing program was filed 3/10/2000. The program ended on May 1, 2002.	To determine whether investment in distribution facilities can be avoided or postponed by inducing customers to install back-up generation.	Customers with generators capable of providing of distribution feeder relief were eligible. Customers were paid a lump-sum amount for their investment in increased generator capacity. The payment amount was dependent on ComEd's avoided investment cost.	Three customers elected to participate in the program. ComEd paid a total of $185,000 in incentive payments to participating customers. ComEd also deferred $1.8 million in transmission and distribution work for one year as a result of the program.

C. High Density Electrical Load Commercial Installation Pricing Experiment

1. Program Summary

On January 26, 2001, ComEd offered a program to nonresidential customers with potentially unusually high electrical load density requirements. This program was offered as an alternative to Rider 6, which was available to customers with nonstandard loads, such high-density loads. Customers proposing projects with electrical load requirements exceeding 20 Watts per square foot were eligible for the program. The program terminated on February 1, 2002.

Technological developments have led to the creation of businesses that, should the businesses be successful, would use electricity at a significantly higher rate than businesses housed in similarly sized structures. According to ComEd, these businesses, which are referred to as "internet hotels" and by similar names, may use 10 to 20 times more electricity per square foot than typical commercial buildings.

The nature of such business projects is that the project developers must estimate the businesses' electrical needs in advance. However, the projected electric requirements of such projects may not materialize, leaving unused (and potentially unpaid for) distribution facilities.

ComEd stated that it created this program to facilitate the installation of the facilities needed by high-density commercial customers while accounting for the risk that projected load might not be met. The program required participating customers to pay a refundable installation charge to ComEd, which will install all required equipment.

As the customer's electric load grows, ComEd would refund all or some of the customer's installation charges. ComEd stated that this procedure would put the customer in the position of deciding whether it wanted ComEd to proceed with facilities installation, without adding to the risk that ComEd might not be compensated if the customer's projected electric requirements failed to materialize.

Yearly refunds of the installation charges paid in advance by a participating customer were to be calculated based on a refund mechanism described in the notice ComEd filed with the Commission. To receive a total refund of all installation charges the customer's electric load would have to reach the projected level within five years of the inception of the customer's participation. If the customer's load level has not reached 90% of the projected level within five years, ComEd would retain all remaining non-refunded charges.

ComEd stated that this program would help ComEd in gathering data concerning the actual electric load of high-density use facilities. ComEd also stated that the program would help it assess customers' accuracy in projecting the customers' electric requirements.

The determination of the number of customers eligible for the program was at the discretion of ComEd, which retained the right to amend or terminate the program at any time.

2. Program Participation, Progress and Effects

Approximately 60 customers contacted ComEd regarding high-density electrical load facilities. ComEd made presentations about the program to 30 of these customers. One customer signed an agreement with ComEd and paid its refundable installation charge in the form of a surety bond.

ComEd believes that the program met its objectives, as developers have made more realistic load requirement estimates for their projects. ComEd also believed that the program has thus lessened the risk that ComEd and its customers will bear the cost for developers' overoptimistic estimates of the amount of electrical infrastructure capacity they will need to support their projects.

ComEd will provide a similar service to customers that would have otherwise qualified to participate in the program through ComEd's Rider 2 (Electric Line Extensions).

Table 5: High Density Electrical Load Commercial Installation Pricing Experiment

HIGH DENSITY ELECTRICAL LOAD COMMERCIAL INSTALLATION PRICING EXPERIMENT (COMED)			
Program Type / Effective Dates	**Program Objectives**	**Eligible Customers / Participation Incentives**	**Program Results / Expenditures**
Pricing program started on January 26, 2001 and closed to new participants on February 1, 2002. Similar service now offered under Rider 2.	To assist ComEd in gathering data concerning the actual electric load of high-density use facilities and customers' accuracy in projecting load electric requirements.	Non-residential customers are eligible. ComEd will construct facilities for customers upon payment of an installation fee.	One customer is participating in the program. ComEd believes that developers have made more realistic estimates of their need for electrical infrastructure capacity.

D. Low Consumption Communication Network Device Billing and Pricing Experiment

1. Program Summary

On October 23, 2001, ComEd filed a statement with the Commission describing an experimental billing program designed for low-consumption customers taking unmetered service. The program is offered as an alternative to ComEd's otherwise applicable tariffs. ComEd terminated the experiment on August 8, 2002.

The growth of the wireless technology industry has led to the creation of service providers offering such services as Internet access, local area network and other services. The service providers often use radio transmission technology from low-consumption devices mounted on distribution service and streetlighting poles. While these devices use a negligible amount of electricity, the billing charges associated with service under standard tariffs could be quite significant if each device were treated as a separate account, creating a disincentive for service providers from enlarging the scope of their businesses.

ComEd's experimental program allowed device installation located within a municipality's boundaries to be aggregated on a single account for billing purposes. Charges include a fixed monthly charge per device that is based on the electrical consumption of each device. These charges range from $3.75 per month per device for devices with an energy consumption between 0 kWh and 25 kWh, to $8.25 per month per device for devices with an energy consumption between 75 kWh and 100 kWh. Only devices with a consumption level not exceeding 100 kWh per month can be used in the program. An additional monthly customer charge of $5.50 is assessed for each account. Customers are also charged an unspecified initial account setup fee that is determined at the time of application. Customers may also be subject to any fees incurred by ComEd to make any revisions to ComEd facilities necessary to accommodate installation or removal of the participant's devices.

In lieu of this program, a customer would be charged under ComEd's Rate 6 (General Service). Under Rate 6, each account would be charged a customer charge of $8.83 per month, plus a per-kilowatt-hour energy charge and an additional charge per kilowatt-hour.

Participating customers must sign a form that details the initial account setup fees and the notification requirements related to the installation or removal of devices served under the experiment.

2. Program Participation, Progress and Effects

Only one customer participated in the program during 2001.[6] ComEd notes that the introduction of this program happened to coincide with a significant economic downturn in the telecommunication and wireless industries, which is likely the cause of the low participation rate. ComEd concluded that there appears to be no market for this program.

ComEd did not incur any marketing or promotional costs in connection with the program, as program participants were required to pay ComEd for various costs incurred during program implementation. The one participating customer paid ComEd approximately $65,000 for ComEd's costs to modify ComEd's billing system to the participant's devices to be aggregated on a single account.

Table 6: Low Consumption Communication Network Device Billing and Pricing Experiment

LOW CONSUMPTION COMMUNICATION NETWORK DEVICE BILLING AND PRICING EXPERIMENT (COMED)			
Program Type / Effective Dates	**Program Objectives**	**Eligible Customers / Participation Incentives**	**Program Results / Expenditures**
Billing and pricing program started on February 22, 2001 and ended in February 2002.	To determine whether it is appropriate for ComEd to offer a billing alternative to unmetered customers using communication network devices.	Customers with at least 25 communication devices of 140 watts or less and a monthly consumption of less than 100 kWh.	One customer expressed an interest in program, but abandoned participation prior to installation of the radio transmission devices.

[6] This customer declared bankruptcy before any aggregation billing occurred.

E. Enhanced Distribution Billing and Pricing Experiment

1. Program Summary

On October 23, 2001, ComEd filed an experimental program targeted at customers desiring a distribution reliability level that exceeds ComEd's standard level of distribution services. ComEd terminated the program on August 8, 2002. ComEd plans to offer a similar service through a value-added transmission and distribution service.

According to ComEd, customers potentially interested in this program included the following:

(i) High density load customer groups, including "internet hotels";
(ii) Manufacturers with sensitive continuous manufacturing processes;
(iii) Building owners and campus-type facilities tenants needing to install back-up power sources to comply with building codes and regulatory requirements; and,
(iv) Governmental buildings that need back-up power.

ComEd's bundled service customers and delivery services customers purchasing power from a Retail Electric Supplier were eligible for the program. Customers needed to demonstrate either a need for the services or needed to install emergency back-up power in order to meet legal requirements.

Services provided under the program included "power conditioning services" such as power factor correction and voltage support. The equipment installed to provide these services might include relaying, metering, and generation equipment for power conditioning and voltage support designed to ensure the uninterrupted flow of energy. Any generation equipment installed as part of the program would be interconnected with ComEd's distribution system and will be installed on ComEd' side of the customer's meter. ComEd would operate and maintain such equipment, except to the extent that the equipment was provided under the "Retail Electric Supplier" interconnection option.

All equipment interconnected to the distribution system had to meet the requirements of ComEd's general interconnection policy and "any other environmental or regulatory requirements specific to the Program" were to be complied with. Generation facilities that supply power and energy to the grid must comply with interconnection requirements applicable to independent power producers that are included in ComEd's Open Access Transition Tariff on file with the Federal Energy Regulatory Commission and with all appropriate state and federal regulatory requirements.

Customer charges were individually negotiated and were priced and accounted for as competitive services. Program participants were also subject to charges normally incurred under ComEd's applicable tariffs. Participating delivery services were subject to charges specified in ComEd's delivery services tariffs, including transition charges.

Retail Electric Suppliers could install, operate and maintain generation equipment for their customers provided that they met with ComEd's interconnection standards and the equipment was only used for the experimental program. ComEd could also require Retail Electric Suppliers to install or pay for any equipment ComEd needed to ensure safety to prevent interference with service to non-participating customers.

ComEd stated that the total of all generation equipment installed by ComEd and by any individual Retail Electric Supplier under the program would not exceed 10 MW. The total amount of generation that can be interconnected under the program would not exceed 30 MW.

In its October 23, 2001 filing, ComEd stated that it would gather data to determine the customer demand and willingness to pay for the services offered under the program. ComEd also planned to evaluate the potential for expanding the use of this type of installation for curtailment purposes or to increase the supply of energy to the grid.

ComEd also stated that it would provide an annual report to the Commission describing its experience with the program. ComEd terminated the program following the Commission's adoption of 83 Ill. Adm. Code Part 452.

2. Program Participation, Progress and Effects

ComEd identified 29 potential participants for the pilot program. ComEd made initial presentations about the program to 18 of these customers, and completed second meetings with 8 customers. However, none of the customers ultimately signed up for the program. ComEd believes that the relatively low interest level in the program may be related to the recent economic downtown in the telecommunication industry.

Table 7: Enhanced Distribution Billing and Pricing Experiment

ENHANCED DISTRIBUTION BILLING AND PRICING (COMED)			
Program Type / Effective Dates	**Program Objectives**	**Eligible Customers / Participation Incentives**	**Program Results / Expenditures**
Billing and pricing program filed on October 23, 2001. Program was terminated on August 8, 2002.	To allow ComEd to test, monitor and evaluate alternative options for customers seeking a level of reliability that exceeds ComEd standard level of distribution service.	Customers with a specialized need for services offered under the program and customers with a need to install emergency back-up power to meet local code requirements.	ComEd identified potential 29 customers as potential participants. No customer participated in the program.

F. 2002 Voluntary Load Response And System Reliability Initiative Experiment

1. Program Summary

On January 24, 2002, ComEd filed the "2002 Voluntary Load Response and System Reliability Initiative Experiment". The experimental program expired on December 31, 2002. Customers desiring to participate in a similar program may elect service under ComEd's Rider VLR - Voluntary Load Response and System Reliability Initiative (Rider VLR).

The Section 16-106 program provided similar compensated voluntary curtailment options as those made available under ComEd's 2001 curtailment program called the "Load Curtailment Pricing Experiment for Electric Service."

ComEd's filing stated that the experimental program had several purposes. One of these purposes was to provide an experimental method offering market-based prices to customers during periods in which ComEd is seeking voluntary customer curtailment of electric usage. With this experiment, ComEd gathered information to determine whether the market-based approach could be used to obtain curtailment in sufficient quantity and duration to aid system operations. Another potential use of the program was to alleviate constraints in transmission and distribution systems through demand reductions in particular geographic areas.

The program was available to non-residential customers, including bundled and delivery services customers, served by interval data recording meters. Each customer was required to provide a minimum curtailment level of 5% of the customer's summer peak demand, or 10 kW, whichever was greater. The program was also available to other non-residential customers in ComEd's control area, including customers located in Batavia, Naperville, and St. Charles.

June to September 2002 was identified as the period during which curtailments might be called. Any curtailment called by ComEd would last no less than two hours and no longer than seven hours. ComEd stated in its filing that it anticipated providing at least one hour's notice of any curtailment event. ComEd noted that it might request additional curtailment beyond the seven hours duration to achieve localized relief of transmission and distribution congestion. Participating customers were subject to curtailment up to 20 times per curtailment season, up to a maximum of 100 total hours. Curtailment performance was measured by comparing each customer's estimated daily electric load profile with the customer's actual load.

Two options were available to customers: the "Energy Curtailment Component," available to customers purchasing power and energy from ComEd, and the "Transmission and Distribution Curtailment Option Component," available to all participating customers. Curtailment resources already committed to ComEd under other programs were not eligible. Customers taking service under ComEd's Rider PPO could participate in the program directly with ComEd.

Under the Energy Curtailment Component, participating customers received a minimum of $0.15 per kWh reduced during curtailment periods. Payments to customers participating in the transmission and distribution were to be based on ComEd's assessment of the likely customer response for curtailments that would benefit the transmission and distribution functions of ComEd.

In addition to these two options, ComEd instituted an "Early Advantage Program," which was available to customers willing to commit to a minimum load reduction of 1,000 kilowatts. Customers participating in this part of the experiment signed customer-specific contracts with ComEd.

No penalties were to be assessed for a customer's failure to respond to a curtailment request.

2. Program Participation, Progress and Effects

ComEd received total customer curtailment commitments from 3,834 customers interested in participating in the Voluntary Load Reduction Program, resulting in approximately 657 MW available for curtailment. The 30 participants in the Early Advantage Program resulted in 143 MW in load available for curtailment. The number of customers participating and the number of MW available for curtailment in these programs represented increases from 2001.

ComEd's expenses related to the program were approximately $500,000 in 2002.

ComEd did not call a system-wide curtailment in 2002. Nevertheless, ComEd believes that the increase in customer participation in the program compared to participation levels in 2001 indicates a widespread customer interest in market-based load curtailment programs. ComEd also notes that the large number of geographically dispersed participants would enable ComEd to respond to localized system needs should ComEd wish to ask customers to curtail their loads in particular areas.

Table 8: 2002 Voluntary Load Response And System Reliability Initiative Experiment

VOLUNTARY LOAD RESPONSE AND SYSTEM RELIABILITY INITIATIVE EXPERIMENT			
Program Type / Effective Dates	**Program Objectives**	**Eligible Customers / Participation Incentives**	**Program Results / Expenditures**
Billing and pricing program filed on January 24, 2002. Program terminated on December 31, 2002. A similar program is now in effect under Rider VLR.	To determine whether a market-based voluntary curtailment program can aid in system operations.	Non-residential customers, including bundled and delivery services customers, served by interval data recording meters. Also available to other non-residential customers in ComEd's control area.	No curtailments were called in 2002.

V. Section 16-106 Program Operated by Illinois Power Company During 2002 (Load Reduction Pricing Experiment)

1. Program Summary

On June 8, 2000, Illinois Power Company filed a statement describing its intention to offer a load curtailment program to its commercial and industrial customers. The pricing experiment was initiated in response to heightened awareness about reliability and commodity market pricing during peak pricing periods. In response to the Illinois Attorney General and the Federal Energy Regulatory Commission, the program emphasized demand side management. The purpose of the program was to test the belief that customers would voluntarily curtail their load requirements prior to receiving a directive from Illinois Power to curtail their load.

Customers taking service under interruptible, recallable, curtailable tariffs were not eligible for the program. Illinois Power's firm PPO customers, and delivery services customers taking service from Retail Electric Suppliers were eligible. Customers must have had metering capable of providing interval usage data. The number of customers eligible to receive service would be at the discretion of Illinois Power, and would be based on various technical and economic criteria.

Participating customers would be notified by telephone, fax or e-mail one day prior to a curtailment. Curtailments could also be called with less notice, should conditions arise. Customers would be notified also of the price Illinois Power would pay for the curtailed energy. Customers were not obligated to participate on a given day. There were no minimum load reduction requirements.

Curtailed energy would be calculated as the difference between actual energy consumed during the requested period and the amount of energy participating customers would normally be expected to use during the same period. Customers would be compensated by check soon after each voluntary curtailment.

The program will terminate by December 31, 2004.

2. Program Participation, Progress and Effects

No voluntary curtailments were called during 2000, 2001 or 2002.

Table 9: Load Reduction Pricing Experiment

LOAD REDUCTION PRICING EXPERIMENT (ILLINOIS POWER)			
Program Type / Effective Dates	**Program Objectives**	**Eligible Customers / Participation Incentives**	**Program Results / Expenditures**
Pricing program began June 2000. The program is scheduled to terminate by 2005.	To measure non-residential customers' response to voluntarily curtail their load requirements in return for kWh-based payments.	Non-residential customers, with the exception of customers already taking service under existing curtailment programs or taking non-firm PPO service.	No curtailments were called during 2000, 2001 or 2002.

VI. Conclusion

This Report has examined the experimental programs administered by AmerenCIPS, AmerenUE, ComEd, and Illinois Power, the Illinois electric utilities operating programs during 2002 under Section 16-106 of the Act. Nine Section 16-106 programs were in operation during 2002. The number of experimental programs has decreased significantly since the Commission's of Part 452 and the electric utilities' subsequent election of their status as Integrated Distribution Companies. ComEd, in particular, has terminated nearly all of its Section 16-106 programs due to Part 452. However, some of the programs formerly offered under Part 452 are now being offered under Commission-approved tariffs.

ComEd has offered a diverse set of experimental programs since it first began offering programs in December 1997. ComEd's programs can be grouped into two general categories. One type of program concerns programs designed for selected customer groups. Several hundred customers have participated in the three programs of this type that ComEd has operated. ComEd has also operated programs that are intended to enhance the reliability of ComEd's electric service. Several of these programs were in operation during 2002. AmerenCIPS, AmerenUE and Illinois Power have also offered load curtailment programs.

Expenditures on ComEd's Section 16-106 programs have been substantial, as its total expenditures during 1997-2002 on these programs now exceed the $130 million mark. This figure does not take into account the amount of transition charge revenue that ComEd has lost, and will lose in the future, as a result of giving discounts to Section 16-106 program participants who subsequently become delivery services customers. The expenditures associated with the experimental programs offered by other utilities have been more modest.

In the following section, the Commission presents comments about issues related to the programs operated by electric utilities during 2001.

A. Effect on the Electric Rates of Non-participants

Each of the programs under Section 16-106 has offered rate discounts or other inducements to the customers participating in the program. For most of the larger-scale programs, the discounts have ranged from about 5% to 15%. These discounts likely will not have an impact on the future electric rates by customers not participating in the programs because of the provisions in the Act that allow the Commission, when it sets base electric rates, to exclude the expenditures on experimental programs undertaken pursuant to Section 16-106.[7]

B. Costs and Benefits of the Experimental Programs

The offering of rate discounts or participation incentives gives rise to the question of whether the rate discounts or incentives are commensurate with the expected benefits of the programs; that is, whether the inducements offered to eligible customers are such that the inducements encouraged maximum participation while minimizing costs.

The Commission has no reason to believe that the payments associated with ComEd's primary load curtailment program (the "2002 Voluntary Load Response and System Reliability Initiative Experiment"), were high in comparison to the expected benefits related to the preservation of system reliability. Similarly, the benefits of ComEd's program to defer maintenance on certain parts of its transmission and distribution system by encouraging customers to install their own generation seemed to at least match the costs of the program.

The wind and photovoltaic generating experimental program is currently of a very small size, and has had only a negligible effect on system reliability. Since a major purpose of this experiment is to benefit system reliability, the costs spent on this program may not yet be worth the benefits that have been achieved by the program. Likewise, ComEd operated has operated other small-scale programs related to enhancing reliability that have attracted very little participation. However, while the benefits of the programs were minor, ComEd's costs were equally small.

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[7] See Section 16-111(d) of the Act.

C. Are the Section 16-106 Programs "Experiments?"

A question that arises when a utility implements an experimental program is whether the programs truly are "experimental," as that term is used in Section 16-106. Or, put another way, the question is whether the experiments initiated by Ameren, ComEd and Illinois Power were the type of programs contemplated by Section 16-106.

ComEd's load curtailment program does not seem to be the type of program envisioned by Section 16-106. While the program serves a useful and important public purpose, the Commission believes that the program is "experimental" only in the very loose sense of the word. Rather than "experiment," as one would ordinarily use that term, the program was apparently implemented as a convenient means to help ComEd maintain a reliable amount of electric supply during peak usage periods. There are other means that ComEd could have used to implement this program that do not involve Section 16-106. For example, ComEd could have filed this program for Commission review, which would have also permitted an opportunity for any interested party to comment on the program. The same comments apply to the curtailment programs implemented by Ameren and Illinois Power.

It is difficult to imagine that the General Assembly anticipated that a utility would use Section 16-106, a section of the Law entitled "Billing Programs," to implement a program that tests the proposition that customers who receive compensation as a result of service outages would have a more favorable opinion of the utility.

On the other hand, ComEd's use of the Section 16-106 mechanism to implement a renewable energy program and other small-scale programs seems a proper use of Section 16-106. Even so, there are likely parties who would have appreciated an opportunity to comment on these programs before they were put into place.

D. Effects on Competition

In determining whether there may be harmful effects on competition from an experimental program, one should consider the effect of the program on two markets. One market is the market in which the customers participating in the programs sell products. The second market is the electricity market in which program participants themselves are customers.

There should be negligible, if any, effects on competition from the implementation of the load curtailment programs. Had the programs resulted in ongoing rate discounts, there might also be concern about the long-term effects of such discounts on competition, but the programs have only offered short-term rate discounts. Moreover, the utilities have not called general curtailments over the last couple of years.

ComEd's program to encourage self-generation might be considered to be positive for electric competition (even though the program is presently of limited scale), since the program encourages participants to move away from ComEd's electric supply service. Likewise, the small-scale wind and photovoltaic program might also be considered to be beneficial to competition, for the same reason. The Reliability and Restoration Pricing Experiment should have a negligible effect on competition, even though it may result in some customers having a more favorable opinion of ComEd. Finally, the low-participation programs obviously will not have much impact on competition.

Appendix

Table 10: List of Section 16-106 Experimental Programs, 1997-2002

Name of Program	Program Dates	Electric Utility	Eligible Customers
Voluntary Curtailment Billing Experiment	3/19/1999 - Present	AmerenCIPS	Nonresidential customers
Pay As You Go Billing Program	9/10/1999 – 9/2001	AmerenUE	Low-income customers
Voluntary Curtailment Billing Experiment	5/17/1999 - Present	AmerenUE	Nonresidential customers
Affinity Group Billing Experiment	12/31/1997 – 12/31/2000	ComEd	IRMA members only
Consolidated Billing Experiment – Revised	12/31/1999 – 6/30/2001	ComEd	Commercial customers
Dispatchable Back-Up Generation and Distribution Reliability Pricing Experiment	6/12/2000 – 5/1/2002	ComEd	Nonresidential customers
Enhanced Distribution Billing and Pricing Experiment	10/23/2001 – 2/1/2002	ComEd	Customers showing need for continuous service
High Density Electrical Load Commercial Installation Pricing Experiment	1/26/2001 – 2/1/2002	ComEd	High-density use customers
Load Curtailment and Generated Energy Procurement Pricing Experiment I	6/26/1998 - 7/3/1998	ComEd	Nonresidential customers
Load Curtailment and Generated Energy Procurement Pricing Experiment II	7/14/1998 - 12/31/1998	ComEd	Nonresidential customers
2000 Load Curtailment Pricing Experiment for Electric Service – Revised	5/4/2000 – 12/31/2000	ComEd	Nonresidential customers
Low Consumption Communication Network Device Billing and Pricing Experiment	2/22/2001 – 2/1/2002	ComEd	Customers with low-consumption communication devices

Table 10: (Continued): List of Section 16-106 Experimental Programs, 1997-2002

Name of Program	Program Dates	Electric Utility	Eligible Customers
Reliability and Restoration Pricing Experiment	5/30/2000 – 12/31/2000	ComEd	Customers whose service was interrupted
Student Power 2000 Pricing Experiment	1/30/1998 – 12/31/2000	ComEd	Public and private grade K-12 schools
Wind and Photovoltaic Generation Pricing Experiment	2/7/2000 – 2/1/2002	ComEd	Customers owning a wind or photovoltaic generator
2002 Voluntary Load Response and System Reliability Initiative Experiment	1/24/2002 – 12/31/2002	ComEd	Nonresidential customers
Load Reduction Pricing Experiment	6/8/2000 – 12/31/2004	Illinois Power	Nonresidential customers
Large Customer Conservation Pricing Experiment	7/24/1998-9/30/1998	Illinois Power	Nonresidential customers
Small Customer Conservation Appreciation Pricing Experiment	7/22/1998-8/1998	Illinois Power	Small-use customers